

We claim:

1. A virus attenuated by a multiple-passage attenuation method comprising the step of:

5 successively replicating said virus through inoculation and replication of the virus in respective individual cell cultures until attenuation is achieved, said successive replication including the step of removing virus-containing samples from at least certain of said cell cultures while the virus is replicating at a logarithmic rate and prior to induction of cytopathic effects in said certain cell cultures, and inoculating the next
10 respective cell culture passages with said samples, said virus being capable of eliciting antibody response specific for porcine reproductive and respiratory syndrome virus strains in swine.

15 2. The virus of claim 1, said virus being substantially avirulent and having been passaged a minimum of 200 times in cell culture.

20 3. The virus of claim 1, said virus having ATCC Accession Number VR-2638.

4. A vaccine comprising the virus of claim 1.

25 5. A method of differentiating between attenuated and virulent strains of PRRSV, said strains having RNA which is cleaved into known fragment numbers or lengths after cleavage by a restriction enzyme, depending upon whether the strain is attenuated or virulent, said method comprising the steps of:

30 obtaining a sample containing PRRSV viral RNA;
digesting said RNA with said restriction enzyme;
determining fragment numbers or lengths after said digesting; and
correlating said determined fragment numbers or lengths with said known fragment numbers or lengths.

6. The method of claim 5, said restriction enzyme being *NspI*.

7. The method of claim 5, said known fragment lengths including fragments of about 476, 380, and 173 base pairs in length.

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8. The method of claim 5, further including the step of isolating said RNA from said sample.

9. The method of claim 8, said isolated RNA including a portion approximately 1 Kb in length.

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10. The method of claim 9, said 1 Kb portion being subjected to said digesting.

11. The method of claim 9, further including the step of performing RT-PCR on said 1 Kb portion.

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12. An attenuated PRRSV strain having N+1 fragments after digestion by a restriction enzyme, wherein strains having N fragments after digestion by said restriction enzyme are not attenuated.

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13. The strain of claim 12, said restriction enzyme being *NspI*.

14. The strain of claim 12, one of said fragments having a length selected from the group consisting of about 476, about 380, or about 173 base pairs in length.

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15. A method of reducing reproductive and/or respiratory failure in swine comprising the steps

of:

providing a vaccine, said vaccine comprising at least one attenuated strain of
PRRSV; and
administering said vaccine to said swine.

16. The method of claim 15, said strain being selected from the group consisting of RespPRRS/Repro, JA-142, and combinations thereof.

17. A PRRS virus including a sequence having at least 75% sequence homology with SEQ ID No. 1.

18. A vaccine comprising the virus of claim 17.

19. An isolated RNA sequence having at least about 65% sequence identity with a sequence selected from the group consisting of SEQ ID No. 3 and SEQ ID No. 4.